

Claim Listing

1. (Currently amended) An apparatus [A detector] for determining a characteristic of a sample, which comprises:

a base;

a sample [body part] receiver supported by the base;

a pair of nodes, including a first node and a second node, positioned at spaced apart locations in the sample [body part] receiver and operative to contact the sample [a body part] when the sample is positioned in the sample [body part] receiver;

a source that generates an Rf signal having a selected frequency spectrum that is coupled to said pair of nodes and transmitted from the first node through the sample for detection by the second node;

an analyzer coupled to the pair of nodes that analyzes the Rf signal transmitted through the sample and detected by the second node to determine the characteristic of the sample; and

a pair of magnets that improves the Rf signal transmitted by the first node through the sample to the second node, one of the [said] magnets being positioned adjacent the first node [one of said nodes], the other of the [said] magnets being positioned adjacent the second node [other of said nodes].

2. (Currently amended) The apparatus [detector] as claimed in claim 1, wherein the sample is a human digit and wherein the sample [said body part] receiver is sized to receive the [a] human digit in contact with said nodes.

3. (Currently amended) The apparatus [detector] as claimed in claim 2, wherein said human digit is a finger.

4. (Currently amended) The apparatus [detector] as claimed in claim 1, including a magnetically permeable and electrically insulating barrier disposed between one of the magnets

and the first node [each node] and the other of the magnets and the second node [said magnet adjacent thereto] to prevent contact therebetween.

5. (Currently amended) The apparatus [detector] as claimed in claim 1, wherein each node comprises an electrically conductive plate.

6. (Currently amended) The apparatus [detector] as claimed in claim 1, wherein the analyzer detects a change in a magnitude of at least one characteristic frequency within the selected frequency spectrum to determine the characteristic of the sample[including a source that generates an Rf signal having a selected frequency spectrum that is coupled to one of said nodes].

7 (Currently amended) The apparatus [detector] as claimed in claim 1, wherein the pair of magnets are permanent magnets that generate a magnetic field surrounding at least the pair of nodes and at least a portion of the sample when positioned within the sample receiver for analysis [including a receiver coupled to the other of said nodes].

8. (Currently amended) The apparatus [detector] as claimed in claim 1, wherein the analyzer detects a change in a magnitude of the Rf signal at a specific frequency within the selected frequency spectrum to determine the characteristic of the sample, the specific frequency corresponding to a biological molecule within the sample, the characteristic corresponding to presence of the biological molecule, the change in the magnitude corresponding to the concentration of the biological molecule within the sample[detector is adapted to detect a characteristic].

9. (Currently amended) The apparatus [detector] as claimed in claim 9, wherein the characteristic is an analyte concentration.

10. (Currently amended) The apparatus [detector] as claimed in claim 9, wherein the analyte includes a biological molecule.

11. (Currently amended) The apparatus [detector] as claimed in claim 9, wherein the analyte comprises glucose.

12. (Currently amended) The apparatus [detector] as claimed in claim 9, wherein the analyte comprises a protein.
13. (Currently amended) The apparatus [detector] as claimed in claim 9, wherein the analyte comprises hemoglobin A1c.
14. (Currently amended) The apparatus [detector] as claimed in claim 9, wherein the analyte comprises a virus.
15. (Currently amended) The apparatus [detector] as claimed in claim 9, wherein the analyte comprises an enzyme.
16. (Currently amended) The apparatus [detector] as claimed in claim 9, wherein the analyte comprises cholesterol.
17. (Currently amended) A method for detecting a characteristic of a sample, comprising:
 - (a) providing an apparatus comprising (i) a base; (ii) a sample receiver supported by the base, (iii) a pair of nodes, including a first node and a second node, positioned at spaced apart locations in the sample receiver and operative to contact the sample when the sample is positioned in the sample receiver, (iv) a source that generates an Rf signal having a selected frequency spectrum that is coupled to said pair of nodes and transmitted from the first node through the sample for detection by the second node, (v) an analyzer coupled to the pair of nodes that analyzes the Rf signal transmitted through the sample and detected by the second node to determine the characteristic of the sample, and (vi) a pair of high gauss permanent magnets that improves the Rf signal transmitted by the first node through the sample to the second node, one of the magnets being positioned adjacent the first node, the other of the magnets being positioned adjacent the second node;
 - (b) receiving the sample in the sample receiver such that the sample is in contact with the first node and the second node; and
 - (c) analyzing a change in the Rf signal transmitted by the first node through the sample to the second node to determine the characteristic of the sample[The detector, which comprises:

a body part receiver;

a pair of nodes positioned at spaced apart locations in the body part received to contact a body part positioned in the body part receiver; and,

a pair of magnets, one or said magnets being positioned adjacent one of said nodes, the other of said magnets being positioned adjacent the other of said nodes;

a source that generates an Rf signal having a selected frequency spectrum that is coupled to one of said nodes; and,

a receiver coupled to the other of said nodes].


18. (Currently amended) The method [detector] as claimed in claim 17, wherein the change is a change in a magnitude of at least one characteristic frequency within the selected frequency spectrum[wherein said magnets comprise permanent magnets].

19. (Currently amended) The method [detector] as claimed in claim 18, wherein the characteristic is a presence of a molecule in the sample[permanent magnets are each grade 36 to grade 41 magnets].

20. (Currently amended) The method [detector] as claimed in claim 18, wherein the characteristic is a concentration of a molecule in the sample[permanent magnets are each NdFeB magnets].

Applicant looks forward to further prosecution on the merits. Should Examiner Natnithithadha feel, at any time during prosecution of this application, that a telephone conversation with Applicants representative would be useful to clarify or expedite matters, the Examiner is invited to call the undersigned.

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